

Proposed Outline for Report to the California Legislature on
Feasibility of Dynamic Pricing
(Report required by Senate Bill 1976: Chapter 850)
Draft April 25, 2003

The staff prepared this outline to stimulate discussion among stakeholders and provide feedback on the report to the Legislature. Suggestions on topics or chapter content are welcome. First draft target lengths are specified after each chapter description.

I. Introduction

Senate Bill 1976 calls for an assessment of:

...the feasibility of implementing real-time, critical peak, and other dynamic pricing tariffs for electricity in California, as strategies which can either reduce peak demand or shift peak demand...

Since this bill was adopted in late 2002, the Energy Commission and Public Utilities Commission have worked together to develop and implement time of use pricing rates for some customers and critical peak prices for some customers. Critical peak prices lie halfway in the spectrum between fixed prices and prices that change as a function of market conditions. The agencies involved decided it was important to pursue this hybrid rate form first, both to help educate customers and because real time prices were not yet available in the market during 2003. Preliminary investigations suggest customers can adapt to these prices and reduce peak loads. This report provides a status report on what has been learned so far from proceedings conducted to date and the expected peak savings from these rates over the next five years.

Suggested chapter length- 4 pages

II. Roadmap of Report

The chapters of this report are organized into distinct discussion topics, each meeting a different legislative requirement of SB 1976. Specific legislative requirements are annotated in italics within the particular chapter addressing the requirement. The content of each chapter is briefly stated below.

- Chapter I provides a background on California's electricity pricing environment, a status report of the work from the ongoing proceeding for investigating the feasibility of dynamic electricity pricing, lessons learned thus far, and estimated magnitude of peak demand savings to be expected from time-varying tariffs.
- Chapter II describes the structure of the report.

- Chapter III reviews progress in developing time-varying tariffs and defines critical peak pricing concepts for different customer classes.
- Chapter IV identifies important policy issues raised in agency proceedings that could require legislative review or action.
- Chapter V addresses questions raised in SB1976 with respect to the feasibility of implementing time- varying rates and real time rates (hourly changes) for specific customer classes, and the potential for these rates to provide benefits to all customers by making changes in wholesale markets.
- Chapter VI provides a qualitative assessment of the benefits and costs of time-varying pricing.
- Chapter VII provides a forecast of the likely level of megawatt reductions and other benefits that can be expected from the implementation of these rates.
- Chapter VIII discusses strategies that can be used to safeguard vulnerable customers who may not prefer to be exposed to dynamic prices.
- Chapter IX identifies barriers and challenges to the implementation of these rates that may require legislative and/or agency action.
- Chapters X and XI provide recommended agency and legislative actions necessary for supporting the implementation of time-varying electricity tariffs in California.

Suggested chapter length- 1 page

III. Procedural Background

- A. Review of Energy Agency actions in 2001, 2002 and 2003 to promote dynamic pricing.
- B. Description of proposals for critical peak pricing tariffs for commercial customers and decision to proceed with statewide residential/small commercial pilot for next 18 months--interactions with other proceedings.

Legislative requirement 2(b)(4): "An assessment of the options for a variety of customer classes, including, but not limited to, industrial, commercial, residential, and tenants of a mobilehome park, apartment building, or similar residential complex, that receive electricity from a master-meter customer through a submetered system."

Suggested chapter length- 2 pages

IV. Important Policy Issues Raised During the Proceedings

- A. Default tariffs for all customers.
- B. Cost effectiveness of AMR deployment.
- C. Estimate of potential peak load reductions by class.
- D. Availability of real time price data.
- E. Pilot tests being conducted to resolve some of these issues.

Suggested chapter length- 5 pages (approx. 1 page per element)

V. Feasibility of Providing Customers with Choice of Dynamic Tariffs

- A. Time Of Use.
- B. Critical Peak Pricing.

Legislative requirement 2(b)(2): "Options for day-ahead and hour-ahead retail prices."

Legislative requirement 2(b)(3): "Options for facilitating customer response to real-time and critical peak prices and managing total customer costs, including, but not limited to, interval metering and communications systems, consumer-side of the meter notification, and automatic response equipment."

- C. Real Time Pricing.

Legislative requirement 2(b)(2): "Options for day-ahead and hour-ahead retail prices."

Legislative requirement 2(b)(3): "Options for facilitating customer response to real-time and critical peak prices and managing total customer costs, including, but not limited to, interval metering and communications systems, consumer-side of the meter notification, and automatic response equipment."

- D. Bidding/Wholesale.

Legislative requirement 2(b)(1): "How wholesale real-time prices would be calculated and made available to customers."

Legislative requirement 2(b)(6): “Options for incorporating demand responsiveness into the wholesale competitive market and operations of the California ISO.”

Suggested chapter length- 6 pages

VI. Qualitative Assessment of Benefits and Costs

Legislative requirement 2(a): “...feasibility of implementing real-time pricing, critical peak pricing, and other dynamic pricing tariffs...”

- A. Consumer choice.
- B. Reduce number of special programs.
- C. Customer and system benefits.
- D. Costs.

Suggested chapter length- 4 pages

VII. Expected Levels of Demand Response (Peak Savings) by 2007 under Different Tariff and/or Program Options

Legislative requirement 2(b)(5): “Provide estimates of potential peak load reductions resulting from the tariffs, including the shifting of peak load demand to off peak periods.”

- A. Impacts of providing time of use rates to all customers.
- B. Impacts of providing critical peak pricing option.
- C. Impacts of providing real time prices.
- D. Impacts of bidding on demand response.

Suggested chapter length- 2 pages

VIII. Strategies or Options to Provide “Vulnerable” Customers with Effective Safeguards from Volatile Prices

Legislative requirement 2(b)(7): “Options for ensuring customer protection under a real time, critical peak or other dynamic pricing scenarios, including potentially disadvantaged groups. “

Suggested chapter length- 2 pages

IX. Barriers and Challenges Slowing Development of Dynamic Pricing/
Demand Response Capability

A. Real Barriers:

1. Legislated
2. Customer perceptions of harm
 - a. Cost: economic impacts vs. comfort/convenience
 - b. Information burden
 - c. External Impacts: environmental pollution, etc.

B. Implementation Challenges:

1. Technology markets
2. Electricity markets
3. Utility systems
4. Customer education

Suggested chapter length- 5 pages

X. Recommended Agency Actions to Overcome Barriers and Challenges

Content TBD

Suggested chapter length – TBD

XI. Recommended Legislative Actions to Promote Reliability and Lower
Procurement Costs

Content TBD

Suggested chapter length- 3 pages